

1 **Table 1:** Model selection results, showing the degrees of freedom (df) and deviances for each model from the most complex (model 1)
 2 to the simplest model (model 5) for each non-host species combination. The best model in all three cases was the most complex model
 3 which included densities of the first non-host species (X_1), densities of the second non-host species (X_2) and the interaction ($X_1:X_2$)
 4 between the two non-hosts species. The dispersion factor (ϕ) for the best-fitting model for each non-host species combination is
 5 shown. For details of model selection procedures see text and Fig. S1.

Model code	Model	df	Deviance		
			Crabs & seaweed	Seaweed & oysters	Oyster & crab
1	$X_1+X_2+X_1:X_2$	48	130.7	840.1	183.1
2	X_1+X_2	57	306	1034.7	638.8
3	X_1	60	615.3	1873.3	683.4
4	X_2	60	1090.3	1232.3	1302
5	1	63	1373.9	1930.5	1355.5
ϕ from best fitting model			2.72	17.5	3.81

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